Introduction

Aim of the project is the development of harmonized guidelines for the integrated pest management in sugar beet in Germany. Environmental effects of herbicide use (different strategies) in splitted application are measured exemplarily and compared with modelled environmental risks.

Project conduction

Measurement of environmental effects takes place in cooperation with Julius Kühn-Institute (JKI) Braunschweig at 20 sites. The industry partners model the fate of active ingredients, while the modelling of environmental risks is done at JKI Kleinmachnow, based on data of field trials. The results are used for the improvement of competitiveness of farms. Knowledge is quickly transferred to advisory services and agricultural practice.

Subproject 1: development of sugar beet specific IPM-guidelines

- Literature overview
- First draft of sugar beet specific principles of IPM
- Working Group
  - Discussion with sugar beet experts in a project accompanying working group
- Final draft of the proposal of guidelines for integrated pest management in sugar beet
- Publication in praxis relevant journals

Subproject 2: Environmental impact of plant protection strategies

- Strategies of herbicide application / splitting
  - Work mode 1: Earthworms, litter decomposition
  - Work mode 2: Epigeic fauna
    - JKI Braunschweig
  - Work mode 3: modelling of a.i. relocation
    - Chemical companies
    - JKI Kleinmachnow
  - Work mode 4: environmental risk simulation
    - JKI Kleinmachnow

  - Measured effects
    - Interpretation of measured effects
    - Measured effects
      - Single trial sites
      - Extrapolation for Germany:
        a) scenarios for tested herbicide strategies;
        b) scenarios for typical herbicide strategies (NEPTUN)
  - Predicted effects
    - Final discussion with all project partners